

Memorandum

To: Bruce Brubaker, Principal, PlaceWorks
Cliff Lau, Associate II, PlaceWorks

From: Matt Kowta, Managing Principal
Matt Fairris, Senior Associate

Date: July 9, 2021

Re: Antioch Infill Housing Financial Feasibility Analysis

INTRODUCTION

This memorandum provides an evaluation of the financial feasibility of residential development in Antioch based on three development prototypes. With Antioch considering allowing 'infill' residential development on certain lots currently zoned for commercial development, BAE tested the feasibility of developing townhomes, garden-style stacked apartments, and a higher-density multifamily project with podium parking on the ground floor. BAE Urban Economics (BAE) defined these development prototypes in consultation with PlaceWorks and City staff, based on recent comparable projects in the region that would be appropriate for the local commercial centers under consideration for potential infill housing development.

In this memorandum, feasibility testing is conducted in two steps. First, a pro forma analysis compares the construction and development costs of each project type to the potential market value of the project based on average cost and revenue assumptions for the City of Antioch overall. Second, the results of the pro forma analysis for each prototype are considered in the specific context of ten different commercial centers in Antioch, to assess how the different sites may affect the cost and revenue assumptions from the pro forma analysis. For example, development at a specific commercial center may require less site work to prepare for construction compared to the average raw site upon which apartments or townhomes are built, which would suggest such a site may be a good candidate for rezoning to encourage development. These two steps will help the City understand what it takes to build townhomes or apartment complexes in Antioch, identify any local barriers to development, and determine the sites best suited for the three prototypes considered.

FINANCIAL FEASIBILITY ANALYSIS

Methodology

The three development prototypes were chosen in consultation with PlaceWorks and City staff, based on discussions of similar and nearby areas and recent development there to understand what has been feasible and would suit Antioch in terms of scale and character. After establishing the prototypes, BAE interviewed developers with local experience to ascertain development costs for similar and recent projects in Antioch and neighboring cities and to confirm revenue assumptions (i.e. sale prices, asking rents, cap rates). Cost assumptions include sitework, site acquisition, soft and hard constructions costs, fees and permits, and financing costs. This 'baseline' is then adjusted to account for potential shifts in policy (i.e. reducing fees, increasing density), market shifts (i.e. increases in sale prices), and developer adjustments (i.e. accepting lower profit margins, constructing more cheaply than assumed). Finally, each prototype and the sensitivity testing for each one is considered in the context of ten specific commercial centers in Antioch, evaluated with respect to the site's impact on the feasibility of a prototype.

Residential Prototypes

As mentioned previously, the three residential prototypes studied in this memo were for-sale townhomes, stacked garden-style flats, and high-density apartments with podium parking. A summary of the prototypes is provided in Exhibit 1 on the following page, followed by descriptions of each prototype.

Exhibit 1: Residential Prototype Summaries

Summary	TOWNHOMES		STACKED UNITS		PODIUM PROJECT	
Site Size - Acres / Sq Ft	7.5	326,700	5	217,800	3	130,680
Residential Units						
1 Bedroom (units / sf)	0	n.a.	98	700	127	700
2 Bedroom (units / sf)	0	n.a.	37	1,000	49	1,000
3 Bedroom (units / sf)	120	2,200	15	1,250	19	1,250
Net Residential (units / sf)	120	264,000	150	124,350	195	161,650
Res Circulation (% / sf)	0%	0	20%	24,870	25%	40,413
Total Residential Sq Ft		264,000		149,220		202,063
Number of Stories		3		3		4
Residential Lot Coverage		88,000		49,740		50,516
Parking						
	Number	Sq Ft/Space	Number	Sq Ft/Space	Number	Sq Ft/Space
Total Tuck-Under Parking (a)	240	400	0	300	0	300
Total Surface Parking (b) (c)	24	400	240	400	168	400
Total Podium Parking (b) (c)	0	n.a.	0	n.a.	144	350
Total Parking	264	105,600	240	96,000	312	117,600
Parking Coverage (Surface Only)		9,600		96,000		67,200
Total Lot Coverage (Res + parking)		97,600		145,740		117,716
Hardscape/Landscaping/Other Site Usage		229,100		72,060		12,964

Notes:

(a) the 300 square feet per tuck-under parking space is included in the 2,400 square foot unit size.

(b) The total parking provision for multifamily projects is 1.5 spaces per dwelling unit, and an additional space for every ten units, based on industry standards rather than specific City of Antioch requirements.

(c) For the multifamily podium project, the total parking provision amounts to 312 spaces. The maximum number of podium spaces is equal to the residential lot coverage (i.e. building footprint) divided by the size of each podium space, 350 square feet. This equals 144 podium parking spaces, leaving a total of 168 surface parking spaces.

Sources: City of Antioch; PlaceWorks; BAE, 2021.

Prototype #1: For-Sale Townhomes

The prototype for the for-sale townhomes is based on a 7.5-acre site with 16 dwelling units (du) per acre, which is consistent with the existing R-20 Medium Density Residential District in the Antioch Zoning Code. The prototype includes 120 three-bedroom units of 2,200 square feet each, including a two-car 400 square foot tuck-under garage within each unit. There are an additional 24 surface parking spaces, or one space for every five units, with each space occupying 400 square feet, including circulation and drive aisles. for total surface parking coverage of 9,600 square feet. Most higher-density developments account for some percentage of circulation space for features like hallways, stairs, entrances, and elevators, though townhome developments rarely contain any of these features. As such, the townhome pro forma analysis assumes zero additional circulation space. The total lot coverage totals 97,600 square feet of residential development and surface parking, leaving the remainder of the site for hardscape, landscaping, and other uses such as road access.

Prototype #2: Stacked Flats

The stacked, garden-style prototype assumes a 150-unit development on a five-acre site, which equals 30 du per acre and is consistent with the city's existing R-35 High Density Residential District. The unit mix includes 98 one-bedroom units of 700 square feet each, 37 two-bedroom units of 1,000 square feet, and 15 three-bedroom units of 1,250 square feet. After accounting for 20 percent of space occupied by circulation features, the gross building size is 149,220, and represents 49,470 square feet of lot coverage. Based on industry standards and comparable projects, this prototype also includes 240 surface parking spaces, or 1.5 spaces per unit and one additional space for every ten units. The total lot coverage, including residential and parking, amounts to 145,740 square feet, resulting in 72,060 square feet of hardscape, landscaping, and other uses such as road access.

Prototype #3: High-Density Podium

The podium prototype is based on a density of 65 du per acre, which does not comply with the City's highest allowed residential density of 35 du per acre in the R-35 High Density Residential District. However, this prototype, which includes podium parking and elevators, typically requires a higher density to build given the increased costs associated with the construction type and is therefore two stories taller than the stacked flats prototype to accommodate a higher unit yield. To test this type of development for feasibility in Antioch, the pro forma analysis uses the hypothetical 65 du/acre density. This prototype assumes a three-acre site totaling 195 units (127 one-bedroom units, 49 two-bedroom units, and 19 three-bedroom units) that are the same size as units with the same bedroom counts in the stacked flats prototype. Given the elevators and fire exits required for a building of this size, the prototype assumes 25 percent circulation for a total of 202,063 square feet of gross residential development.

The total residential lot coverage is just over 50,000 square feet, accounting for the building's four stories of residential development and one story of parking podium. Assuming the podium parking is on the ground floor of the building, and each space occupies 350 square feet, the maximum number of podium parking spaces is 144. The project is expected to deliver 312 parking spaces, based on comparable projects, leaving 168 surface parking spaces of 400 square feet each requiring a total surface area of 67,200 square feet. In total, this leaves just under 13,000 square feet of the 130,680 square feet of site area for hardscape, landscaping, and other uses such as road access.

Baseline Cost and Revenue Assumptions

The following section outlines the development cost and revenue assumptions that inform the baseline feasibility analysis. These cost and revenue assumptions are based on interviews with local developers with recent experience in Antioch; an analysis of recent land sales, home sales, and rental rates that BAE conducted as part of this study; and a review of development applications for recently completed projects. These assumptions are reflected in the pro forma financial feasibility models that are included in Appendix A to this memo.

Development Cost Assumptions

Site Acquisition Cost – The estimated site acquisition cost is the same for all three prototypes at \$15 per site square foot, as all prototypes would be located on similar vacant sites within the local market area.

Site Work – Similar to site acquisition, the amount of required sitework for any of the commercial centers is assumed to be the same for all prototypes, at \$20 per site square foot. Sitework includes grading, excavation, and preparing the site for construction.

Residential Hard Costs – Townhomes have the lowest assumed residential hard construction costs per gross building square foot, at \$170. Residential hard costs are higher for stacked, garden-style flats due primarily to the increased engineering and equipment needs, which are even higher for high-density podium projects. The assumed residential hard costs per gross building square foot for stacked flats is \$200, and \$215 for the podium prototype.

Parking Costs – There are three types of parking assumed in the three prototypes: tuck-under parking, surface parking, and podium parking. All three prototypes include some surface parking, while townhomes also include tuck-under garage parking, and the podium prototype includes first-floor covered podium parking. Surface parking costs per space are the cheapest at \$10,000 per space, while podium parking costs per space are the highest at \$60,000 per space. The tuck-under parking is assumed to be included in the per square foot residential hard construction cost and therefore not included as a separate cost assumption.

City Impact and Permitting Fees – City impact and permitting fees are based on the City's master fee schedule, and also include the regional East Contra Costa Regional Fee and Financing Authority (ECCRFA) fees applied to development projects in Antioch. As is typical for most city fees, and particularly impact fees, per unit rates charged for single-family development (townhomes) are higher than for multifamily units. The ECCRFA fee for the townhomes is \$24,337 per unit, and the fee is \$14,940 for both multifamily rental apartment prototypes. Inclusive of all city and regional fees, the total fee and permitting costs per unit for the townhomes prototype is approximately \$54,000 per unit, and \$36,000 per unit for both multifamily rental prototypes.

Soft Costs – Softs costs, which are typically estimated as a percentage of hard construction costs, include the costs associated with engineering, legal, and accounting services. Soft costs of 12 percent of hard costs are assumed for the townhomes and stacked flats prototypes, and 14 percent for the podium prototype. The increase for the latter is due to the increased engineering costs associated with a more complex construction type.

Developer Profit – In order to attract developers and investors, real estate projects must generate sufficient levels of profit. Based on conversations with local developers, BAE assumes a developer profit equal to 15 percent of hard and soft costs, would be sufficient to attract developers to build these residential prototypes in Antioch.

Financing Costs – Assumptions regarding the financing of construction loans is almost the same for all prototypes. Developers are assumed to take out a loan valued at 70 percent of construction costs and be charged a loan fee of one percent of the loan amount. The construction period interest is estimated based on an annual interest rate of five percent and a drawdown factor of 65 percent. However, whereas the loan period is assumed to be 18 months for townhomes, it is 24 months for the multifamily prototypes given the typical construction timeline of larger projects.

Operating Cost and Revenue Assumptions

Residential For-Sale Prices – The residential sale price assumed for townhomes, \$575,000 per unit or \$319 per square foot, is the same for all units, and is based on the sale price for newly constructed townhome developments in Antioch and nearby areas such as Brentwood.

Townhome Marketing Costs – The pro-forma analysis assumes that developers of for sale projects also incur marketing costs of two percent of gross sales revenue.

Residential Rental Rates – Although rental rates per square foot by bedroom size vary throughout Antioch, the following rents are assumed for both multifamily prototypes:

- 1-bedroom unit - \$2,275 (\$3.25 per square foot) per month
- 2-bedroom unit - \$2,750 (\$2.75 per square foot) per month
- 3-bedroom unit - \$2,938 (\$2.35 per square foot) per month

Residential Rental Operating Expenses – In order to calculate the Net Operating Income (NOI) of the rental prototypes, BAE assumes operating costs are equal to roughly 33 percent of the prototype's rental income. This includes property taxes, on site property management, and on-site amenities. BAE also assumes a five percent vacancy rate to account for standard apartment turnover and loss of rental income.

Residential Capitalization Rate – The residential capitalization rate (cap rate) represents the rate of return on a real estate investment property with a net operating income, like a multifamily rental project, and is used to estimate project value. Net operating income divided by the cap rate provides an estimated project value, so lower cap rates correspond with higher project values. Investors assign a cap rate to a project based perceived project risk, assigning lower cap rates to safer projects, and higher cap rates to riskier projects. Developers and brokerage reports suggest that a cap rate of five percent is generally representative of valuations of rental products in the Antioch area.

Baseline Financial Feasibility

The following summarizes the financial feasibility of the baseline prototypes. For the complete pro forma feasibility models, please see Appendix A. Appendix A-1 is the pro forma financial feasibility model for the For-Sale Townhome Project Prototype, Appendix A-2 is the Stacked Flats Project Prototype, and Appendix A-3 is the High-Density Podium Project Prototype.

Prototype #1: For-Sale Townhomes

None of the baseline prototypes are financially feasible based on the description of the project and cost and revenue assumptions discussed above, although among the three prototypes, the townhomes are closest to feasibility. The total baseline prototype townhome project costs are approximately \$70.5 million, including hard costs (\$36.7 million), developer profit (\$8.2 million), site work (\$6.5 million), fees and permits (\$6.5 million), soft costs (\$5.2 million) and site acquisition (\$4.9 million). Spread over the 120 townhomes in the prototype project, the cost per unit is \$587,866, while the cost per Gross Square Foot is \$267, and the cost per Net Square Foot is \$327.

These costs outweigh the total expected gross sales revenue (\$67.6 million) by \$2.9 million, called the feasibility gap. This feasibility gap is roughly \$24,500 per unit, suggesting that reducing project costs per unit by this amount or more would allow the project to be feasible. The order of magnitude of this feasibility gap (four percent of project costs) is not necessarily a significant barrier to feasibility, as this difference may actually fall within the range of error for this type of conceptual analysis. Given this, BAE tested several project feasibility sensitivities in the Financial Feasibility Sensitivity Adjustments section, below, to identify mechanisms to improve the feasibility of the residential development prototypes.

Prototype #2: Stacked Flats

The baseline stacked flats prototype is not currently feasible, with a feasibility gap of \$5.8 million. The capitalized project value of \$53.4 million is outweighed by \$59.2 million in project costs that is comprised in part by residential hard costs (\$29.8 million), developer profit (\$7.0 million), site work (\$4.4 million), fees and permits (\$5.4 million), soft costs (\$4.4 million) and site acquisition (\$3.3 million). The total project costs per unit is \$394,717, while the cost per Gross Square Foot is \$397, and cost per Net Square Foot is \$476.

The feasibility gap is roughly \$38,640 per unit (ten percent total costs), which is somewhat higher than the per unit feasibility gap for the baseline townhomes prototype, highlighting the relative infeasibility of this rental prototype compared to for-sale townhomes. Even though the total project costs are approximately \$10 million lower than for the 120-unit townhome project, the assumed rents are too low for the capitalized value of the project's income to match the development costs. Based on the various sensitivities tested for this prototype, and discussed below in more detail, residential rental rates have the most significant impact on feasibility, with modest rent increases required to render this project feasible.

Prototype #3: High-Density Podium

The high-density podium prototype has the highest overall development costs at \$87.9 million. This includes \$43.4 million in hard costs, \$10.7 million in developer profit, \$7.8 million in soft costs, \$7.1 million in fees and permits, \$2.6 million in site work, and just under \$2.0 million in site acquisition. However, the capitalized value of the project, which is based on the same rents as in the stacked flats prototype, is just \$73.2 million, for a feasibility gap of \$14.7 million, or 17 percent of total costs.

On a per unit basis, the cost of the podium prototype is \$450,697. This equates to \$435 on a gross square foot basis, and \$544 on a net square foot basis. The per unit feasibility gap is \$75,074. The difference in per unit feasibility gap between the stacked flats and podium prototypes is driven entirely by the increased residential hard costs for the podium project, including an additional \$8.6 million in podium parking costs alone. Podium parking costs are equivalent to \$44,300 per unit, or 59 percent of the feasibility gap per unit.

Financial Feasibility Sensitivity Adjustments

In addition to the baseline pro forma analyses reflected in the model printouts included in Appendix A, BAE conducted sensitivity testing that assesses the impact on feasibility from potential changes in three key categories: development costs, city fees and policies, and shifts in the market. The baseline prototype feasibility analyses assume existing City policies regarding density, fees, and permit costs. The City may be able to influence the feasibility of prototypes by adjusting these policies to support development. Similarly, some developers may be able to construct the prototypes for lower costs than our research has suggested, such as through reductions in building or material costs. Developers may also choose to accept lower profit margins for less risky projects. Finally, demand for housing in Antioch may change, potentially raising or lowering the assumed sale and rent prices.

In addition, each prototype is tested for feasibility by removing the costs of site acquisition and lowering assumed site work costs. Some developers may have acquired their sites long ago at costs much lower than those assumed for the pro forma analysis or may be able to obtain sites at a discount, such as through foreclosure or other mechanisms. Moreover, as many of the commercial centers are already developed, some may not require extensive site work to prepare for new residential construction.

The results of each sensitivity tested below assumes all other costs and revenues are equal to those in the baseline prototypes and are therefore not representative of cumulative feasibility impacts. These high-level project sensitivities provide the basis for the following section that discusses general feasibility of the residential prototypes when considered in the specific context of each of the ten commercial center sites.

Development Cost Adjustments

Following is a range of key development cost components that BAE tested for sensitivity.

Reduced Hard Costs

While developers may not be able to adjust residential hard construction costs, interviews with developers generated a range of hard costs estimates. Larger developers can often achieve economies of scale for both material procurement and construction costs, and smaller developers may have their own efficiencies. Additionally, material costs may rise and fall with market forces, like the recent rise and fall in the price of lumber in 2021.

Reducing hard costs by ten percent in the baseline pro forma analysis has the largest impact of any sensitivity tested (although it is roughly equal to the impact of zero cost land in the case of the townhomes prototype, which has the highest site acquisition costs). For the townhomes prototype, reducing hard costs by ten percent improves the economics of the project by \$4.9 million, resulting in a feasible project. Reducing hard costs in the stacked flats prototype increases the project value by \$4.4 million, though the project still has a feasibility gap of \$1.5 million. This prototype would require some additional reduction in cost, such as reduced impact fees, or a small increase in rents in order to be feasible. Finally, for the podium prototype, reducing hard costs by ten percent is worth \$7.8 million, although this would still leave a feasibility gap of \$8.6 million.

Reduced Land Acquisition Cost

Some developers mentioned that they obtained property at rates below the current market price for a range of reasons, including having obtained the property years ago, or having obtained it through foreclosure proceedings or at an auction. This is a major advantage for developers, particularly for the townhome prototype, which is based on a larger site than the stacked flats prototype, which is itself on a larger site than the podium prototype. Eliminating land acquisition costs would increase the townhomes prototype project value by over \$5 million, providing for a net development gain of \$2.2 million. The overall impact of eliminating land acquisition costs is lower for the stacked flats prototype (\$3.4 million) and offsets a smaller percentage of the prototype's feasibility gap, thus not making the project feasible by reducing this cost alone. Similarly, the podium prototype feasibility improves by just \$2 million for a reduced, but still significant, feasibility gap of \$12.6 million.

Reduced Site Preparation Costs

Site preparation costs could reasonably be reduced if the site is already graded or prepared to accommodate residential development, which may be the case for some of the sites assessed in this study. As the site for the townhome prototype is the largest, the impact of reduced site preparation costs is not only largest for townhomes but represents a larger portion of the feasibility gap compared to the stacked flats or podium prototypes. The value of reducing site preparation costs by 20 percent is \$1.3 million for the townhomes prototype, compared to \$870,000 for the stacked flats prototype, and \$550,000 for the podium prototype.

Reduced Developer Profit

The baseline pro forma analysis assumes 15 percent developer profit, which is consistent with estimates from developers interviewed for this study. Some developers may be willing to accept lower profit margins if they expect projects to run relatively smoothly, which can be impacted by the cooperation and coordination between the developers and the City.

Developers accepting 12 percent profit (a 20 percent reduction from the baseline profit assumption) improves the feasibility of all prototypes, but alone does not render any feasible. The feasibility gap for the townhomes prototype improves by \$1.6 million, but still leads to a feasibility gap of \$1.3 million. However, combining this adjustment with any of the other sensitivities tested would likely render the townhome prototype feasible.

The value of reduced developer profit in the stacked flats prototype narrows the project feasibility gap by \$1.4 million, but a gap of \$4.5 million would still remain. It would be necessary to combine the reduced profit margin with other cost savings, such as elimination of land acquisition costs and reduction of impact fees, in order to achieve feasibility. Finally, reducing developer profit does not significantly improve the feasibility of the podium prototype, which would still have a feasibility gap of \$12.5 million. Combining the reduced profit margin with elimination of land costs and reducing fees to \$30,000 per units would still not lead to project feasibility, highlighting the significant feasibility gap of the podium project.

City Fees and Policies

Following are cost components relating to City fees and policies that BAE tested for sensitivity.

Impact Fees

City impact and permitting fees account for nearly ten percent of the baseline total project costs for townhomes and stacked flats, and eight percent of the podium prototype. While impact fees and permits are generally dedicated to providing services to new development and paying for City services, the City may be able to subsidize or lower fees in order to encourage development. For example, as all the prototypes would be infill development, the City may be able to adjust water and sewer fees or roads fees as the development may not generate net new demand for these facilities/systems, or may generate reduced demand as compared to similar projects that could be built in “greenfield” locations on the City’s periphery where infrastructure does not yet exist.

The baseline townhomes prototype is just \$24,532 per unit short of feasibility, while the total fees and permits per unit is more than double that at \$54,279. Approximately \$30,000 of this per unit total is City fees (the rest are ECCRFA fees), so subsidizing these fees would render the baseline townhome prototype feasible. More conservatively, if the \$54,000 total fees and permits were reduced to \$40,000, the project feasibility gap narrows by \$2 million, from a loss of \$2.9 million, to a gap of just \$900,000, which is within the margin of error for this type of conceptual analysis. Further, the remaining \$900,000 gap would be eliminated with a few minor adjustments to other cost assumptions, such as hard costs and site work.

Using a similarly conservative approach, reducing City fees and permits from \$36,000 for the multifamily prototypes to \$30,000 clearly has a smaller overall impact on the feasibility of both multifamily prototypes. Reducing fees to \$30,000 improves feasibility by \$1.1 million from a loss of \$5.9 million to a loss of \$4.7 million for the stacked flat, and by \$1.5 million for a total loss of \$13.1 million for the podium prototype. Reducing fees does not significantly improve the feasibility of the podium prototype, but for the stacked flats, the combination of reducing fees to \$30,000 and either a ten percent reduction in hard costs or no land acquisition costs could make a project feasible.

Project Densities

The City can also potentially allow higher densities on the infill sites than currently allowable by zoning, such as by approving a 40 du per acre density for the stacked flats prototype or approving 20 du per acre for townhomes. By allowing more units to be built on a given site, site acquisition and site work costs are spread over more units, reducing the project costs per unit.

This is particularly valuable for the baseline townhome prototype, where the land acquisition costs are the highest due to the fact that it is the lowest density prototype and requires the largest site. By permitting 20 du per acre for the townhomes (150 total units), the project feasibility gap decreases by \$2.7 million to just \$225,000, which is essentially feasible for a project of this size. By increasing the stacked flats density to 40 du per acre (200 total units), project feasibility improves by \$1.1 million but the development gap of \$4.8 million indicates the project would still be infeasible. BAE did not test increased densities for the podium prototype, which is already based on hypothetical 65 du per acre density.

Parking Spaces

The City can also support projects with lower parking ratios, although only stacked flats are significantly impacted based on our assumptions. Townhomes will still come with two parking spaces, as they are garage spaces built into the residential hard costs. The limited surface parking associated with the townhome prototype only costs \$24,000 in total, or 0.04 percent of construction costs. Similarly, for the podium prototype, the relatively expensive podium spaces are calculated based on the building footprint, as they occupy the ground floor. Thus, if there is a reduction in the parking spaces provided onsite, they would most likely only translate to reductions in the amount of surface parking, which accounts for just two percent of the baseline construction costs for the prototype.

However, for the stacked flat prototype, which has only surface parking, reducing the number of parking spaces to one space per unit, instead of 1.5 spaces, and maintaining the additional one space per ten units, the feasibility of the prototype improves by \$966,000, or 16 percent. Alone, this change would not make the baseline prototype feasible, although the prototype would be feasible if the number of parking spaces is reduced along with a reduction in impact fees and no land acquisition costs. For example, the City may be able to justify reducing

transportation impact fees and requiring fewer parking spaces for a site near the BART station, and if a developer already owns such a site with a relatively low cost basis for the land, the stacked flats prototype could be feasible.

Market Shifts

One of the key factors behind feasibility of the prototypes is the sale or rent price of the units, which are based on market assumptions from May 2021. For both the townhome and the stacked flat prototypes, increasing sales and rent prices by just five percent can drastically improve feasibility and is the third most valuable sensitivity tested after eliminating land acquisition costs and reducing hard costs. For the townhome prototype, a five percent sale price increase would generate an additional \$3.4 million in sales, rendering the project feasible. Sale price increases of less than five percent, combined with other adjustments could also make this prototype feasible.

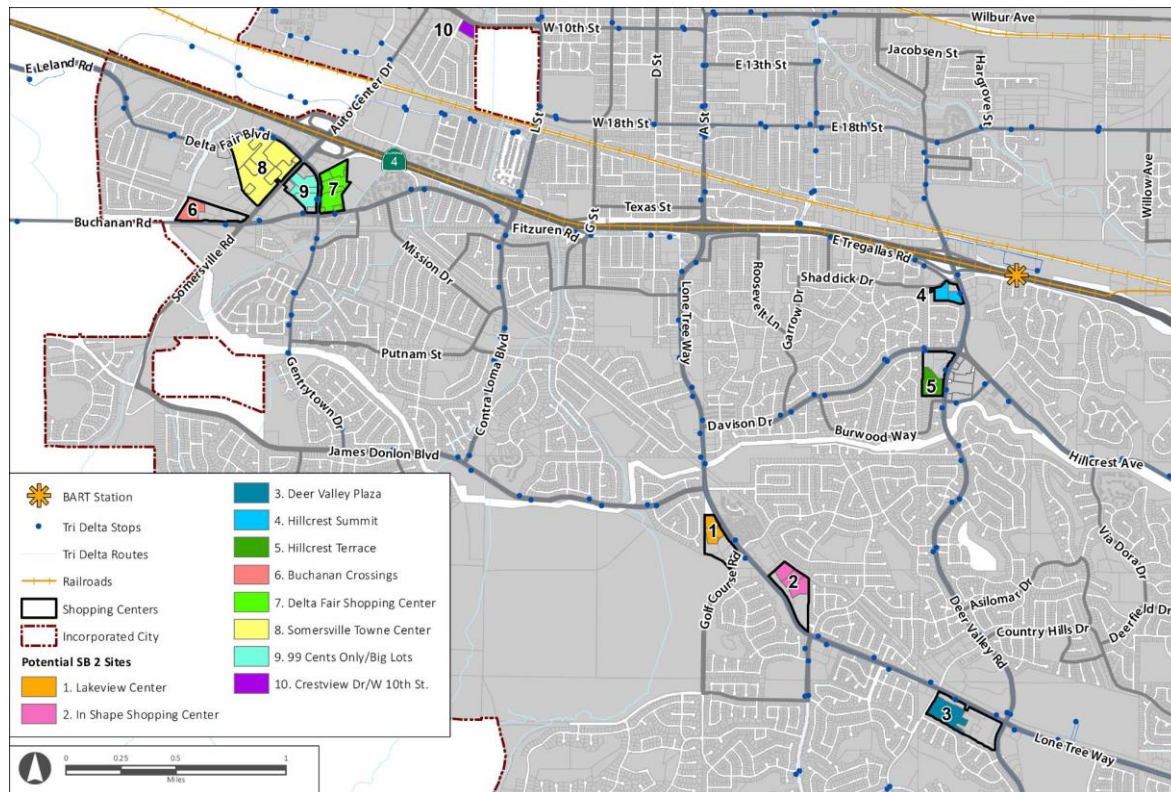
Increasing rents by five percent for the stacked flats prototype reduces the feasibility gap by \$2.7 million for a development loss of \$3.2 million, which would be more than made up by the reduced hard costs or elimination of land acquisition costs tested in this sensitivity analysis. Similarly, a five percent increase in rents, a reduction in impact fees to \$30,000 per unit, and reduced developer profit would also render a stacked flats prototype feasible.

Increasing rents by five percent reduces the feasibility gap for the podium prototype by \$3.7 million, though it still leaves a feasibility gap of roughly \$11 million. This indicates that a rent increase alone will not lead to feasibility – a developer would need to also find some significant cost reductions in order to put together a feasible podium prototype project.

COMMERCIAL CENTER FEASIBILITY ASSESSMENT

The following section uses the baseline prototypes, combined with the above sensitivity analysis findings, to qualitatively discuss site-specific factors that drive potential feasibility of the prototypes at each of the ten commercial center sites. The discussion covers site-specific factors that drive potential reductions in development cost or increases in project value assumptions for each of the ten commercial centers shown below in Exhibit 2, along with the likely overall effects on prototype feasibility.

Exhibit 2: Antioch Infill Commercial Centers



Source: PlaceWorks, 2021.

Site #1: Lakeview Center

Development Cost Adjustments – The vacant 5.3-acre development site may require additional site preparation costs due to the site topography that requires additional excavation and removal of dirt. The site does have an existing internal right-of-way to access the remainder of the shopping center, likely reducing the cost by a minor amount. On the whole, this site does not pose any significantly better or worse conditions relative to what was assumed in the baseline model. As such, BAE estimates the total development costs from the baseline model are generally representative of this site.

Project Value Adjustments – As was found in the commercial center economic profiles, this area of Antioch has a relatively strong for-sale housing market, with a high percentage of single-family homes in the surrounding neighborhood selling at prices that are above average for the city. Due to these strong for-sale market conditions, sale prices for new townhomes in this market area may be a few percentage points higher than the baseline pro forma assumptions. As noted above, this project prototype would be feasible with a five percent sale price increase, reaching roughly \$600,000 per unit in sale price. Given the high for-sale prices in this area, townhomes development at those sale prices may be feasible.

Conversely, this area has limited rental housing stock and therefore is not tested for rental market demand. Thus, it would be risky to assume rents in this area would extend beyond the rents assumed in the baseline pro forma model, which were insufficient to generate a feasible rental project.

Feasibility Conclusions – The for-sale Townhome Prototype likely represents the most feasible project at this commercial center in today's market conditions. This is primarily driven by the relatively high home sale prices in this area of Antioch, which likely increases the potential sale price of townhomes in this area. That said, prices would need to reach above \$600,000 per unit, which is well above any comparable townhome in eastern Contra Costa County, suggesting increases in sale prices may not be the sole mechanism that should be considered to render a townhome project on this site feasible.

Site #2: In-Shape Shopping Center

Development Cost Adjustments – The 8.9-acres of vacant land within the broader In-Shape shopping center has exceptional characteristics that could reduce development costs. First, the site is vacant and flat, leading to less need for site grading or any demolition of existing buildings. Secondly, the site has existing entrance and egress, leading to fewer roadway-related costs. Lastly, the site appears to have some existing utility connections already to the potential development site, therefore reducing the cost to extend and upgrade the utilities to the site. The larger site size of nearly nine acres also improves the potential economies of scale of a development project on the site, potentially reducing the per unit development costs.

Project Value Adjustments – Like the Lakeview Center site, this site is located in a rather strong for-sale market, with high sale prices relative to the rest of Antioch. This could potentially indicate higher sale prices for townhomes on this site compared to baseline assumptions.

Despite the limited amount of existing rental product in this area, the site is in close proximity to amenities that may cater to a renter population, including a gym, coffee shop, dining locations, pedestrian trail, and future planned on-site commercial development. Considering these factors, rental rates for a new multifamily housing product on this site may be able to achieve slightly higher rates than assumed in the baseline model. In addition, the remaining retail buildout potential of the site may increase the owner's incentive to use the portion of the site for residential development. The owner can sell this portion of the site for residential while holding on to the retail component to see if market conditions improve to render the retail component feasible.

Feasibility Conclusions – Based on site characteristics and market conditions, this site is best suited for the multifamily stacked prototype or for-sale townhomes. Of the commercial center sites along Lone Tree Way, this site likely represents the best option for a larger-scale multifamily rental project given the nearby amenities and large site size to capture economies of scale on the development costs. Considering this site's strengths as a potential multifamily housing site, the City may wish to prioritize this site for a multifamily rental project and allow townhomes to develop on more single-family oriented sites, such as the Lakeview Center.

Site #3: Deer Valley Plaza

Development Cost Adjustments – The most significant component of the Deer Valley Plaza is the former 60,000 square foot AMC Theatre which will almost certainly require demolition. That said, given the site's existing use, the site likely has a large portion of the necessary backbone infrastructure which could reduce overall project costs. The remainder of the site is parking lot, which typically offers relatively easy redevelopment opportunities by requiring limited site grading and preparation. Given any new development will replace the existing AMC Theatre, the City may wish to consider impact fee reductions/credits, which will decrease the total cost of redeveloping the site. This potential impact fee credit would apply to any commercial center redevelopment requiring demolition of an existing development.

Project Value Adjustments – Similar to the above centers, this site along Lone Tree Way is located in a fairly strong market area for for-sale homes, with above-average sale prices. Townhomes in this area may be able to command slightly above-average sales prices that would be sufficient to render a feasible project. By contrast, given the general lack of amenities and the auto-oriented feel of the area surrounding this site, rental rates for multifamily units are unlikely to exceed those assumed in the baseline feasibility model.

Feasibility Conclusions – Similar to other Lone Tree Way sites, the Deer Valley Plaza site is positioned in a primarily single-family neighborhood, suggesting the townhome prototype is likely the best option for this site. Given the required demolition and associated heightened risk of this project, this may be a longer-term redevelopment effort after development on the nearby vacant sites.

Site #4: Hillcrest Summit

Development Cost Adjustments – The vacant 4.9-acre site is generally representative of the baseline generic site conditions assumed in the prototype development projects defined for the baseline feasibility analysis. This includes moderate site grading and infrastructure upgrade costs. The irregular shape of the site may impede the densities assumed in the baseline models, leading to a less efficient development.

Project Value Adjustments – This parcel represents the closest commercial site to the Antioch BART station, a likely draw for rental apartment tenants and home buyers. As such, it is possible that both sale prices and rental rates for new residential development at this site could reasonably exceed those projected in the baseline feasibility model.

Feasibility Conclusions – Given the limited commercial center sites with expected rental residential demand, the City may wish to identify this site for a rental housing product. Although the site is relatively small, the site could likely accommodate a smaller garden-style apartment complex with surface parking instead of the more expensive podium parking project which is most useful on higher value urban sites.

Site #5: Hillcrest Terrace

Development Cost Adjustments – The 6.3-acre Hillcrest Terrace infill site conditions are well-suited to reduce the overall residential development costs. The site is vacant and relatively flat, leading to lower site preparation costs. The site has an access point off Deer Valley Road and likely has some of the necessary utility connections that may further reduce site preparation costs. The site is regularly shaped, allowing for efficient site utilization. The neighboring parcel has an existing multifamily development, which could signal that public opposition to higher-density housing would be less than at other sites where single-family housing is more prevalent. To the extent that reduced opposition leads to a smoother entitlement process, this could translate to lower development costs and/or reduced development risk. Either of these factors would enhance project feasibility by increasing profit potential or reducing the required developer profit threshold, respectively.

One critical component of this site is the ownership. The site is currently owned by Antioch Unified School District (AUSD) which has discretion over the future use of the site. If the AUSD does not have education-related needs for the site, they could utilize this site for future housing development, possibly to support AUSD staff. If the AUSD is interested in teacher or staff housing, this site could be donated to a project to further reduce

development costs. With a reduced or zero land cost, the Townhome Prototype project would be feasible, assuming sale prices stay the same at roughly \$575,000 per unit. The multifamily rental projects still require additional subsidies or cost savings to achieve financial feasibility, such as reduced impact fees or reduced hard costs.

Project Value Adjustments – Market conditions in the Hillcrest Terrace area are likely improving due to the recent delivery of the higher-density WildFlower Station project across the street from the Hillcrest Terrace shopping center. This project includes for-sale condominium units that have been in relatively high demand, with increasing sale prices and a limited number of days on market. This project was originally planned as rental residential, though the developer identified a stronger for-sale market and ultimately opted to sell the units rather than rent them. This finding aligns with BAE's baseline pro forma models in that the economics of the for-sale prototype are better than for the two rental products. One main reason for this is that the City of Antioch has a relatively limited supply of new rental multifamily residential developments, especially in the Hillcrest area, to prove the market for newer rental apartments. Given this, the current market conditions may continue to promote for-sale product, which suggests that slightly more aggressive sale price assumptions are probably less risky than more aggressive rental rate assumptions at this time.

Feasibility Conclusions – The ultimate use of this site will be dictated by the AUSD, given its current site ownership. There may be an opportunity for this public agency to subsidize the development of more affordable homes by providing the land at reduced cost or no cost. The site size is ideal for a moderately-sized multifamily rental project, similar to the residential project on the north end of the commercial center. That said, the nearby WildFlower Station project indicates strong demand for ownership units, suggesting townhomes would likely be feasible with above-average sale prices.

Site #6: Buchanan Crossing

Development Cost Adjustments – The 5.4-acre Buchanan Crossing site generally aligns with the assumptions made in the baseline feasibility models. The site is vacant with a few large mounds of land that will require some increased site preparation costs. Conversely, the site also has an existing entrance point and some existing utilities to the site that could help to reduce costs. All of this likely balances out to be comparable with the overall development costs estimated in the baseline models.

Project Value Adjustments – This site is located in a fairly diverse market area in terms of residential unit types and nearby amenities. Sales prices and rents are somewhat lower in this part of Antioch, suggesting that new development at this site may not experience the same escalated rent or sale prices that are possible elsewhere in the city. Therefore, the project value is unlikely to be substantially higher than the baseline modeling assumptions that generally apply to other commercial center sites.

Feasibility Conclusions – Given the limited adjustments to development costs or project value estimates, residential development at Buchanan Crossing will likely require some form of subsidy or significant value engineering of the development. The neighborhood characteristics indicate this site could reasonably accommodate for-sale townhomes or a rental multifamily development, though the economics of either project do not currently render a feasible project. This suggests that the city may wish to prioritize development on other commercial centers in more desirable locations.

Site #7: Delta Fair Shopping Center

Development Cost Adjustments – The 14.7-acre Delta Fair Shopping Center is fully built out with underperforming retail spaces. Any future residential development would require demolition of existing buildings, thus increasing the total development cost. Conversely, the site is flat and likely has the necessary utilities serving the existing retail buildings which may reduce other site preparation costs for redevelopment with housing. Owners of property that includes income producing structures typically expect their properties to command sale prices higher than the sale price for bare lots that was utilized in the baseline feasibility analysis; however, considering that the site is currently underperforming as a retail center and existing buildings may be fully-depreciated and/or nearing obsolescence, the existing owner may be more motivated to sell or redevelop the site. This could reduce the land sale price, knowing that the future of this parcel will require significant additional investment in the form of demolition and several years of limited income generation. Further, considering that new development at this site would replace existing retail uses, this may justify some reductions/credits for impact fees, further reducing the total development cost.

Project Value Adjustments – The site is located in a modest rental and for-sale housing market area, but based on further examination, rents and for-sale prices for newly developed residential units may have the potential to exceed those assumed in the baseline models. In terms of sale prices, the trade area has notably smaller units than all units sold throughout the city, leading to a lower median sale price but higher sale price per square foot. This may suggest increasing demand for smaller for-sale units like townhomes and condominiums in this area and therefore a slightly higher sale price for the townhome prototype. From a rental perspective, the property is surrounded by older multifamily rental developments. Although rents at these existing properties are relatively low, due to the age of the developments, it may indicate a higher demand for rental product in this area relative to other parts of the city that are primarily larger-lot single-family units. A new rental product could tap into an under-served market for newer apartments at higher rental rates.

Feasibility Conclusions – Although the site will require substantial demolition, the under-performance of the site suggests redevelopment is the most likely mechanism for investing in this property. As a result, the existing owner may be more motivated to undertake a redevelopment effort or sell the property at a reduced-rate, leading to a reduced overall

development cost. The large site size does suggest this parcel could accommodate a range of residential prototypes in multiple phases or a single development phase. In the near-term, the economics of a townhome project may be more attractive than building a large multifamily rental project, though this site may also be positioned as a longer-term project that can capitalize on expected rent increases in outer Bay Area cities.

Site #8: Somersville Towne Center

Development Cost Adjustments – Representing the largest development opportunity among the sites analyzed, the 40.9-acre Somersville Towne Center will require substantial costs beyond those envisioned in the smaller baseline prototype feasibility models, though it also presents a more significant opportunity to achieve efficiencies of scale. First, the site will require substantial costs to aggregate the parcels together given that the entire site is owned by several entities. Secondly, the existing owners may demand a higher land sale price for the parcels, as the properties have a modest amount of revenue generated by the existing tenants. Lastly, the development will require demolition of the existing shopping center, which will increase costs beyond those assumed in the baseline feasibility model. Offsetting the factors just mentioned, the City may wish to offer some impact fee credits given the development will replace a large amount of existing retail. In addition, the size of the site may allow for some potential cost savings. For example, the redevelopment team could entitle the entire project at one time, which would be significantly more efficient than entitling the smaller individually-owned parcels. This would set up the development to deliver in several stages over a long timeline. By doing a multi-phase development, the project could develop multiple residential prototypes depending on market conditions. While the townhome prototype is currently the closest prototype to financial feasibility, those dynamics may change and this site can capitalize on longer-term opportunities for for-sale and rental multifamily products that might become more attractive in the future, expanding the potential pool of households who could provide market support for the redevelopment of this large site.

Project Value Adjustments – The Somersville Towne Center is in a somewhat desirable part of Antioch, suggesting rents and sale prices may slightly exceed those assumed in the baseline prototypes. Currently, however, the necessary rent increase to garner a feasible project is likely too high for this neighborhood and a rental project would therefore require additional subsidy in order to be financially feasible. Given that the project would require substantial pre-development analyses and demolition prior to construction, development of this site would not likely start for several years. Over this time, market conditions may improve in Antioch to render one or more of the residential prototypes feasible.

Feasibility Conclusions – The size of this redevelopment opportunity represents both the most significant challenge and opportunity for this site. It will likely require several years of work to secure full entitlements, but has the potential to deliver hundreds if not thousands of units in the long-term. The City may wish to prioritize the near-term development of other

vacant sites throughout Antioch, but could also help incentivize the redevelopment of the shopping center by reaching out to the existing owners and helping usher the project through the entitlement process. Ultimately, this site would likely appeal to both for-sale townhome and multifamily rental developers. A podium project is unlikely, given the large site size and ability to provide surface parking, though these economics may change over time if land prices increase and market conditions improve to incentivize the increased density enabled by a podium project. A phasing strategy could start with lower density projects and reserve parcels for higher density development for the later phases, by which time market conditions may better support the more expensive development types.

Site #9: 99 Cents Only/Big Lots

Development Cost Adjustments – Similar to the other commercial sites in this area, including the Delta Fair Shopping Center and the Somersville Towne Center, the 99 Cents Only/Big Lots shopping center will require substantial demolition of existing structures, though it still represents a modest redevelopment opportunity. The property does have existing retail tenants that generate a modest amount of income to the owner, which may result in a higher land sale price relative to other existing sites. The existing commercial buildings suggest the property has utility access and therefore may not require substantial additional site preparation prior to building the residential development. Similar to other larger sites, the size of the site may allow for some economies of scale to reduce the cost of development, though most of these cost adjustments will be rather minor. Redevelopment at this site could also benefit from impact fee adjustments related to removal of existing development to make space for new development.

Project Value Adjustments – As with other nearby commercial sites considered for housing development, the rental and for-sale market is similar to, if not slightly stronger than, citywide conditions. This suggests that rents and for-sale prices may exceed those included in the baseline feasibility analysis. With that said, the baseline rent assumptions are still well above the rents of neighboring apartment buildings and new development is unlikely to command the rent premiums needed to be financially feasible in today's market.

Feasibility Conclusions – This site is less complicated than Somersville Shopping Center and has more existing retail activity relative to the Delta Fair Mall. This positions the site as a medium-term redevelopment opportunity as market conditions improve. Currently, development cost reductions and project value increases are still likely insufficient to create a feasible project in today's market. Nevertheless, this part of Antioch contains several redevelopment opportunities and may produce a concentration of new developments which will bring more investment and improved market conditions to help enhance the financial feasibility of the residential prototypes that could be developed in this area. Given that the for-sale prototype is nearly financially feasible, this site may attract near-term development interest for townhome development, though the City may wish to prioritize higher-density development as a longer-term use for this site.

Site #10: Crestview Drive/West 10th Street

Development Cost Adjustments – The 2.3-acre Crestview Drive/West 10th Street site conditions are quite favorable for development, as the site is vacant, flat, and has some existing infrastructure such as sidewalks, curbs, and gutters, all of which may reduce site preparation costs by a small margin. The relatively small site size does mean that projects will be unable to achieve any significant economies of scale. This suggests that the baseline prototypes are generally representative of the likely development cost on this site. In fact, due to the small site size relative to the prototypes, development on this site may actually be more expensive on a per-unit or per-square foot basis due to the reduced economies of scale compared to the modest-sized prototypes.

Project Value Adjustments – The site is located on the outskirts of downtown Antioch which is planned for some growth in the future. This may increase demand for sites just outside of downtown, like this Crestview Drive/West 10th Street site. However, the nearby uses include a mix of industrial uses, limited retail uses, and some vacant sites, suggesting the property has limited nearby amenities that might drive slightly higher residential rents or sale prices. The project valuation assumptions included in the baseline models are likely representative of the best-case assumptions for this site in today's market.

Feasibility Conclusions – Due to the site size, this parcel would be best utilized as a high-density multifamily podium project. However, as discussed above, this prototype has a significant feasibility gap driven by the significant cost increases to build the parking podium and the relatively low multifamily rents in the City of Antioch in today's market. Rents would have to increase substantially above the existing market rents in order to render a feasible project, which is unlikely in the short-term. This site may be able to accommodate a for-sale townhome project, though this site is still unlikely to support sale prices well above the baseline feasibility assumptions. As a result, this site is unlikely to attract market rate residential development in the short-term barring a significant reduction in development costs, such as site acquisition costs, impact fees, or reduced parking ratios. Given the proximity to downtown, however, this site may benefit from any longer-term spillover demand generated by the increased focus on downtown Antioch.

APPENDIX A: BASELINE PRO FORMA FEASIBILITY MODELS

Appendix A-1: For-Sale Townhome Pro Forma Feasibility Model

Development Program Assumptions		Cost and Income Assumptions		Development Cost Analysis		Feasibility Analysis	
<u>Development Intensity</u>		Site Acquisition (per site sq. ft.)		Site Acquisition Cost		Gross Sales Revenue	
Site Size (Acres / Sq. Ft.)	7.50 / 326,700					\$69,000,000	
Net Density (Dwelling Units/Acre)	16	<u>Construction</u>		<u>Construction</u>		Less Marketing Costs	
Gross Building Size (Sq. Ft.)	264,000	Construction Hard Costs		Construction Hard Costs		(\$1,380,000)	
Building Height (Stories)	3	Site Work Per Site Sq. Ft.		Site Work		<u>Less Total Project Costs</u>	
Site Utilization Factor	26.9%	Residential Per Gross Bldg. Sq. Ft.		Residential (Wood Frame)		(\$70,543,914)	
Floor Area Ratio (Floor Area/Site Size)	0.27	Impact & Permitting Fees Per Unit		Impact & Permitting Fees		Feasibility Surplus / (Gap)	
		Soft Costs (% of Hard Costs)		Soft Costs		(\$2,923,914)	
Construction Type	Type 5 - Wood	Developer Profit (% of Hard and Soft Costs)		Subtotal Construction Costs		Feasibility per Unit	
				Cost Per Unit		(\$24,366)	
Unit Mix (Count / Net Sq. Ft.)	120 / 1,800	<u>Operations</u>		Developer Profit			
Garage Space (Sq. Ft. Per Unit)	400	<u>Per Sq. Ft. / Per Unit</u>					
		Residential Sale Price		<u>Financing</u>			
		Marketing Costs (% of Sale Price)		Interest on Construction Loan			
				Points on Construction Loan			
		<u>Financing</u>		Subtotal Financing Costs			
		Loan-to-Cost Ratio		Total Project Costs			
		Loan Fee (Points)		Cost Per Unit			
		Interest Rate		Cost Per Gross Sq. Ft.			
		Loan Period (Months)		Cost Per Net Sq. Ft.			
		Draw down Factor					
		Total Loan Amount					

Note:

(a) Based on impact fee data provided by the City of Antioch

Sources: City of Antioch; PlaceWorks; BAE, 2021.

Appendix A-2: Multifamily Stacked Flats Pro Forma Feasibility Model

Development Program Assumptions			Cost and Income Assumptions			Development Cost Analysis		Feasibility Analysis	
Development Intensity			Site Acquisition Cost (per site sq. ft.)			Site Acquisition Cost	\$3,267,000	Gross Scheduled Rents	\$4,425,150
Site Size (Acres / Sq. Ft.)	5.0 /	217,800	Construction			Construction		Less Vacancy	(\$221,258)
Net Density (Dwelling Units/Acre)		30	Construction Hard Costs			Construction Hard Costs		Less Operating Expenses	(\$1,533,314)
Gross Building Size (Sq. Ft.)		149,220	Site Work Per Site Sq. Ft.			Site Work		Net Operating Income (NOI)	\$2,670,578
Building Height (Stories)		3.0	Residential, Per Gross Sq. Ft.			Residential (Wood Frame)		Capitalized Project Value	\$53,411,561
Site Utilization Factor		23%	Podium Parking Per Space			Podium Parking		Total Development Cost	(\$59,207,555)
Floor Area Ratio (Floor Area/Site Size)		0.2	Tuck Under Parking			Stacked Parking		Feasibility Surplus / (Gap)	(\$5,795,995)
Construction Type			Surface Parking Per Space			Surface Parking		<i>Feasibility per Unit</i>	<i>(\$38,640)</i>
Type 5 - Wood			City Impact & Permitting Fees Per Unit			City Impact & Permitting Fees			
Unit Mix (Count / Net Sq. Ft.)	150 /	124,350	Soft Costs (% of Hard Costs)			Soft Costs (% of Hard Costs)			
Studio (Count / Avg. Sq. Ft.)	0 /	0	Developer Profit (% of Hard and Soft Costs)			Subtotal Construction Costs			
1 BR (Count / Avg. Sq. Ft.)	98 /	700	Operations			<i>Cost Per Unit</i>			
2 BR (Count / Avg. Sq. Ft.)	37 /	1,000	Apartment Rental Rates (b)			Developer Profit			
3 BR (Count / Avg. Sq. Ft.)	15 /	1,250	Studio (Per Sq. Ft. / Per Unit)						
Circulation (% / (Count / Avg. Sq. Ft.))			1 BR (Per Sq. Ft. / Per Unit)			Financing			
20% /			2 BR (Per Sq. Ft. / Per Unit)			Interest on Construction Loan			
24,870			3 BR (Per Sq. Ft. / Per Unit)			Points on Construction Loan			
Number of Parking Spaces			Annual Operating Cost (% of rental revenue)			Subtotal Financing Costs			
Podium Parking			Average Vacancy Rate						
Tuck Under Parking			Capitalization Rate			Total Project Costs			
Surface Parking			Financing			<i>Cost Per Unit</i>			
Sq. Ft. Per Parking Space			Loan-to-Cost Ratio			<i>Cost Per Gross Sq. Ft.</i>			
Total Sq. Ft. of Parking			Loan Fee (Points)			<i>Cost Per Net Sq. Ft.</i>			
Parking Ratio (Spaces Per Unit)			Interest Rate						
			Period of Initial Loan (Months)						
			Draw down Factor						
			Total Loan Amount						

Note:

(a) Based on impact fee data provided by the City of Antioch

Sources: City of Antioch; PlaceWorks; BAE, 2021.

Appendix A-3: Multifamily Podium Pro Forma Feasibility Model

Development Program Assumptions			Cost and Income Assumptions			Development Cost Analysis		Feasibility Analysis	
Development Intensity			Site Acquisition Cost (per site sq. ft.)			Site Acquisition Cost	\$1,960,200	Gross Scheduled Rents	\$5,753,850
Site Size (Acres / Sq. Ft.)	3.0 /	130,680	Construction			Construction		Less Vacancy	(\$287,693)
Net Density (Dwelling Units/Acre)		65	Construction Hard Costs			Construction Hard Costs		Less Operating Expenses	(\$1,803,832)
Gross Building Size (Sq. Ft.)		202,063	Site Work Per Site Sq. Ft.			Site Work		Net Operating Income (NOI)	\$3,662,326
Building Height (Stories)		4.0	Residential, Per Gross Sq. Ft.			Residential Hard		Capitalized Project Value	\$73,246,511
Site Utilization Factor		48%	Podium Parking Per Space			Podium Parking		Total Development Cost	(\$87,885,917)
Floor Area Ratio (Floor Area/Site Size)		1.5	Stacked Parking Per 2 Spaces			Surface Parking		Feasibility Surplus / (Gap)	(\$14,639,406)
Construction Type	Type 5 - Wood		Surface Parking Per Space			City Impact & Permitting Fees		<i>Feasibility per Unit</i>	<i>(\$75,074)</i>
Unit Mix (Count / Net Sq. Ft.)	195 /	161,650	City Impact & Permitting Fees Per Residential Unit			Soft Costs (% of Hard Costs)			
Studio (Count / Avg. Sq. Ft.)	0 /	n.a.	Soft Costs (% of Hard Costs)			Developer Fee (% of Hard and Soft Costs)			
1 BR (Count / Avg. Sq. Ft.)	127 /	700	Developer Fee (% of Hard and Soft Costs)			Subtotal Construction Costs			
2 BR (Count / Avg. Sq. Ft.)	49 /	1,000	Developer Profit (% of Hard and Soft Costs)			Cost Per Unit			
3 BR (Count / Avg. Sq. Ft.)	19 /	1,250	Operations			Developer Fee/Profit			
Circulation (% / (Count / Avg. Sq. Ft.))	25% /	40,413	Apartment Rental Rates (b)			Financing			
Number of Parking Spaces		312	Studio (Per Sq. Ft. / Per Unit)			Interest on Construction Loan			
Podium Parking		144	1 BR (Per Sq. Ft. / Per Unit)			Points on Construction Loan			
Surface Parking		168	2 BR (Per Sq. Ft. / Per Unit)			Subtotal Financing Costs			
Sq. Ft. Per Parking Space			3 BR (Per Sq. Ft. / Per Unit)			Total Project Costs, Excl. Land			
Podium Parking (350 sf)		50,400	Res. Annual Operating Cost			Cost Per Unit			
Surface Parking (400 sf)		67,200	Res. Average Vacancy Rate			Cost Per Gross Sq. Ft.			
Total Sq. Ft. of Parking		117,600	Res. Capitalization Rate			Cost Per Net Sq. Ft.			
Parking Ratio (Spaces Per Unit)		1.6	Financing						
			Loan-to-Cost Ratio						
			Loan Fee (Points)						
			Interest Rate						
			Period of Initial Loan (Months)						
			Draw down Factor						
			Total Loan Amount						

Notes:

(a) Based on impact fee data provided by the City of Antioch.

Sources: City of Antioch; PlaceWorks; BAE, 2021.